

Appendix I

Practical Strategies for Transforming Concepts

The process of concept formation is always simultaneously a process of concept transformation. There are always conceptual raw materials which go into the production of any new concept. The task of this appendix is to lay out some of the ways in which such a transformation of existing concepts occurs. To do this we will first look briefly at the circumstances within which an impulse for launching the attempt at producing new concepts is likely to occur. This will be followed by a discussion of different forms of concept transformation, different practical ways in which conceptual raw materials are worked on to produce new concepts. This discussion is not meant to be a comprehensive methodological analysis of alternative approaches to producing and transforming concepts, but rather an exposition of a variety of practical strategies that I have found useful in different contexts.

Occasions for Concept Formation

Many, perhaps most, theoretical innovations hinge on the introduction of new concepts or the reconstruction of old ones. Three circumstances typically stimulate such changes: encounters with empirical problems, discoveries of conceptual inconsistencies and dealing with the ramifications of earlier conceptual transformations.

The most common motivation for producing new concepts is undoubtedly dissatisfaction with the ability of existing concepts to deal with empirical problems. The accumulation of empirical cases that do not comfortably fit the existing conceptual map of society suggests that the map is not properly drawn, that new concepts are needed. Two such examples have been discussed in this book: the emergence of locations within the social relations of production of capitalist societies which do not easily fit into either the capitalist class or the working class, and the emergence of post-capitalist societies which do not easily fit into the capitalism–socialism dichotomy. The first of these provided the stimulus for the introduction of the concept ‘contradictory locations within class rela-

tions’, the second for the concept ‘state mode of production’. In both cases the pre-existing concepts within Marxist theory seemed unable to deal effectively with these structural changes.¹

Now, it may turn out that these apparent counterexamples to the existing conceptual framework can, on closer inspection, be accommodated. What is needed may be simply a clarification of existing definitions or a drawing out of their more subtle implications rather than a substantive transformation of those definitions. This possibility is acutely posed in the debate over the class character of ‘actually existing socialism’ (the USSR, Eastern Europe, China, Cuba, etc.). Instead of treating these cases as inconsistent with the capitalism–socialism conceptual dichotomy, they can, for example, be regarded as socialist societies whose concrete institutional forms have been influenced by the continuing existence of powerful capitalist societies. This implies a specific causal argument about the effects of capitalism on socialist institutions, but it leaves intact a particular definition of socialism as public ownership of the means of production.

A second stimulus for the transformation of concepts comes from the discovery of theoretical inconsistencies within the array of existing concepts. Theories are not just collections of concepts which are linked through various kinds of propositions. The concepts themselves are interdependent in various ways. In particular, some concepts can be viewed as sub-species of more general concepts. It may turn out, then, that the criteria which define the general concept may be incompatible with the specification of a particular sub-category within it.

A good example of this problem is posed in the recent debates over the concept of the ‘Asiatic mode of production’, particularly as elaborated in the controversial book by Barry Hindess and Paul Q. Hirst, *Precapitalist Modes of Production*.² Their essential argument is that the concept of an Asiatic mode of production is illegitimate because it cannot be properly subsumed under the general concept of mode of production. The general concept specifies that to count as a mode of production there must be a specific form of correspondence between the relations and forces of production. Such a correspondence, they argue, can be established for the capitalist and the feudal modes of production, but not for the hypothesized Asiatic mode of production:

No concept of a mode of production can be derived from the tax/rent couple, no articulated combination of relations/forces of production can

be deduced, and no systematic conditions of existence for the mode of appropriation of the surplus product, tax/rent, can be constituted.³

The societies identified with that concept, therefore, should be seen as peculiar varieties of communal production, or perhaps in some cases feudal production. I do not want to enter the debate on the cogency of their critique of the concept of the Asiatic mode of production. The important point in the present context is that the critique, and the associated process of concept formation, centred around inconsistencies among different concepts rather than specific empirical problems.

The third context within which an extended process of concept formation is likely to occur is in attempting to deal with the ramifications of earlier transformations of concepts. It is unlikely that a significant transformation of an important concept in a theoretical framework will have no implications for the definitions of other concepts. Tampering with concepts tends to produce sequences of concept transformations, as attempts at theoretical reintegration occur. At times, such tampering may appear to open a Pandora's box as such ramifications are pursued and more and more associated concepts are modified or abandoned. Hindess and Hirst's initial questioning of the concept of Asiatic mode of production led them ultimately to abandon the concept of mode of production altogether. In other situations what might initially appear as a conceptual modification with drastic implications may have fairly narrow effects on other concepts within the theory as a whole. This is the case, I believe, with the important challenges to the core concepts in the labour theory of value. Although clearly of great importance for the whole family of concepts directly employing value categories, it does not appear that the general Marxist concepts of class, exploitation, capitalism, class struggle, etc., require substantial respecification in light of these critiques of the concept of labour values.⁴

Forms of Concept Formation

Once the need is recognized, a variety of strategies can be employed for transforming concepts. In practice, of course, the process may be quite haphazard and unsystematic, and without much self consciousness. Four general strategies, however, seem to underlie many successful productions of new concepts: drawing new lines of

demarcation; respecifying existing lines of demarcation; re-aggregating categories under more general criteria; and decoding the conceptual dimensionality of a descriptive taxonomy.⁵

New Demarcations. One of the basic ways in which an existing concept may prove unsatisfactory is that it incorrectly subsumes quite heterogeneous cases under a single heading. The task of concept formation, then, is to specify a new line of demarcation within the conceptual field.

A good example of this is the problem of post-capitalist societies. Traditionally most Marxists have argued that socialism, as the transitional form of production to communism (or the 'lower stage' of communism), was the only possible form of post-capitalist society. The simple capitalism-socialism dichotomy was seen as an adequate conceptual map of real possibilities. Under such a conceptual framework, societies such as the Soviet Union were necessarily treated as either a variety of socialism or a variety of capitalism (i.e. state-capitalist society). As I argued in chapter three, an alternative is to introduce a new line of demarcation: the distinction between the socialist mode of production, the capitalist mode of production and what might be called the 'state mode of production'. What was previously subsumed under either capitalism or socialism is then treated as a distinct mode of production in its own right.

A similar operation occurs in the transformation of the concept of the working class as wage-labourers into a variety of alternative concepts. Poulantzas's concept of the new petty bourgeoisie, for example, represents a new line of demarcation within the category 'wage labour'. He argues that mental labourers and unproductive labourers, although they are wage-earners, are in an entirely different class from manual, productive wage-earners. What was previously a single conceptual category is thus split into two.

Respecifications of Lines of Demarcation. It may happen that the problem with a concept is not that it needs to be split into a number of distinct concepts, but that the criteria which define its boundaries need modification. There may be redundant criteria, insufficient criteria or simply incorrect criteria.

This kind of dispute over concepts has played an important role in the long-standing debate over the proper definition of capitalism within discussions of the transition from feudalism to capital-

ism.⁶ There is no dispute among theorists over the descriptions of the end points of the process: mature industrial capitalism is seen as a system of production with wage-labour and private ownership of the means of production; classical feudalism is seen as agricultural production within which surplus is appropriated through extra-economic coercion. The disagreement centres on the appropriate criteria for specifying the onset of capitalism, and thus for defining the theoretically pertinent minimum conditions for capitalism to be capitalism: is it sufficient to have economic activity oriented towards profit maximization and accumulation on a market for an economic system to be capitalist, or is it also necessary that there be a free market in labour power—i.e. that exploitation operates through the hiring of free wage labour?

In a similar manner, my debate with Poulantzas over the definition of the working class can be interpreted as a dispute over the appropriate lines of demarcation of the concept.⁷ Poulantzas considered all unproductive wage labourers to be non-workers; I argued that the productive–unproductive labour distinction was an inappropriate criterion for specifying the boundary of the working class. Poulantzas also considered the mental–manual labour distinction to be a criterion for the boundary of the working class. Here my disagreement with him was slightly different. This distinction does derive from a structural feature of production relations which is appropriate for defining the working class, I argued, but the formulation in terms of mental labour was incorrect. It is not by virtue of being a manual labourer *per se* that a wage labourer is outside of the working class, but by virtue of having pervasive control over one's own labour process, or what I called 'semi-autonomy'. While it is true that such autonomy is characteristic of much mental labour, Poulantzas mis-specified the precise nature of the class criterion. My transformation of Poulantzas's concept of the working class in this instance was to respecify this line of demarcation in terms of real relations of autonomy and control.

Reaggregating Categories. A third way of transforming concepts is to subsume them in a new way under a more encompassing concept, a concept which identifies a more fundamental boundary criterion for the concepts aggregated within it. Whereas the first strategy discussed above involved splitting a single concept on the grounds of its internal heterogeneity, in this case distinct concepts are reaggregated on the grounds of their essential homogeneity.

An example of such conceptual aggregation is the elaboration

and refinement of the concept of the 'capitalist state' in recent Marxist theory. A range of concrete forms of the state can be found in capitalist societies: liberal bourgeois democracies, fascist dictatorships, military juntas, social-democratic welfare states, and so on. The central thesis of defenders of the concept of the 'capitalist state' such as Poulantzas and Therborn is that all of these diverse forms of the state can be subsumed under the more general concept of the capitalist state.⁸ This concept does not, of course, imply that there are no theoretically significant differences among these diverse sub-types of the capitalist state, but simply that there are certain deep structural properties which they all hold in common and which justify identifying them all with a single encompassing concept. This aggregation process has the effect of transforming the concepts of each of the specific forms of the state being aggregated, for they are no longer defined solely in terms of formal political institutional characteristics, but in terms of their class character as well. Of course, it goes without saying that this claim may be incorrect. Each of these types of the state may be simply 'states in capitalist society' rather than sub-types of the 'capitalist state'. They may have no distinctive or common class character. The debate over the concept of the capitalist state is thus a debate over the legitimacy of this particular conceptual aggregation as a process of concept formation.⁹

Decoding the Dimensionality of Taxonomies. The final general strategy of concept formation is perhaps the most complex. It involves transforming the taxonomies used descriptively in social theories into conceptual typologies. A taxonomy is a list of categories which are differentiated on the basis of immediately apparent empirical criteria; a typology, on the other hand, is a theoretically constructed set of categories differentiated on the basis of theoretically specified dimensions.¹⁰ Sometimes it may happen that a theory may develop an intuitive typology without recognizing the underlying dimensionality of the categories. In such cases, concept formation consists of making explicit the implicit, undertheorized logic of the typology already in use.

Let me give an example of this strategy from work on the theory of the state. One of the problems facing anyone doing research on the state is how to classify state policies. One approach is simply to take as given the spending categories defined bureaucratically within state budgets. This would constitute a descriptive taxonomy

of state spending, with items broken down by state agency and programmes in various ways.

Such a list of state budgetary items is obviously unsatisfactory from a theoretical point of view. The task of concept formation, then, is to transform this list into a conceptually structured typology. One such typology reorganizes state policies along two dimensions:¹¹

- (1) Whether the intervention is primarily at the level of *circulation* or *production*;
- (2) Whether the intervention is *commodified* or *decommodified*.

Circulation interventions involve the allocation and redistribution of resources that have already been produced. Most welfare spending would fall under this category. Production level interventions, on the other hand, involve the state directly in decisions to produce certain use-values, rather than simply allocating existing resources. Military spending is a classical example of a production-level intervention. The distinction between commodified and decommodified interventions concerns the extent to which the intervention works through the market, reinforcing the commodified character of social production, or, on the contrary, operates outside of the market, potentially even acting against the logic of market relations. A national health service in which the state directly organizes the provision of health care is a relatively decommodified intervention; national health insurance, on the other hand, is a relatively commodified form.

Taking these two dimensions together produces the four-fold typology of state interventions in table I.1:

TABLE I.1
Typology of state interventions in capitalist society

		Forms of state intervention	
		Commodified	Decommodified
Level of state intervention	Circulation	(1)	(2)
	Production	(3)	(4)

To take an example of the differences between these types, state interventions to deal with the problem of malnutrition among poor families could potentially fall into any of these cells. Food stamps would be a paradigmatic commodified-circulation intervention (cell 1): it simply redistributes a targeted income to certain groups to be spent on the open market for the acquisition of food. Free distribution of surplus food to the poor would be a decommodified-circulation intervention (cell 2). Government subsidies to farmers to encourage them to produce certain food products for poor people which otherwise might not be profitable would be a commodified production intervention (cell 3), and state run farms to produce food for the poor would be a decommodified production intervention (cell 4).

The theoretical rationale behind this typology was that as interventions moved from the upper left-hand cell of the typology to the lower right-hand cell, they became potentially more and more contradictory to capitalism itself. The typology of state interventions, therefore, was designed to provide a conceptual map of the potential for unproductive consequences of state interventions.

In addition to providing conceptual order to empirical taxonomies, this kind of dimensionalizing of a conceptual field is useful for clarifying the precise differences between contending concepts within a theoretical debate. Clarifying the dimensionality of the differences in concepts is often a critical step in understanding the real stakes in a debate and pointing the directions for resolution.

For example, within sociology there is a vast array of differing concepts all of which go under the name of 'class'. And there are probably nearly as many different ways of typologizing these differences. To indicate just a few of the possibilities, various theorists have distinguished class concepts as being: continuous or discontinuous (Landecker); dichotomous or gradational (Ossowski); unidimensional or multidimensional (Lipset); market-based or production-based (Crompton and Gubbay); realist or nominalist (Lenski).¹²

I have argued that if our objective is understanding the specificity of the Marxian concept of class, two dimensions on which class concepts vary are particularly important: (1) whether or not the concept of class involves *appropriation relations*, and (2) whether or not it involves *domination relations*.¹³ Appropriation relations are social relations between people within which economic

TABLE I.2
Typology of alternative conceptualizations of class

		Domination relations	
		Central to the concept of class	Marginal or absent in the concept of class
Appropriation relations	Central	Marxist definitions	Market definitions: Weber
	Marginal	Authority definitions: Dahrendorf, Lenski	Status-gradational definitions: Parsons

resources (principally means of production, products and income) are distributed. In capitalist societies the central form of appropriation relations is markets of various sorts, although non-market forms of appropriation relations also exist (e.g. taxation). Domination relations are social relations within which the activities of one group of people are controlled by another. Taking these two dimensions together gives us the four different ways of conceptualizing class represented in table 1.2.

In terms of this typology, the distinctiveness of the Marxist definition of class is that class relations are defined simultaneously by relations of domination and appropriation (with appropriation relations—i.e. exploitation—being primary). As in the Weberian analysis of classes in capitalist society, this means that market relations play an important part in specifying class structures. Marx, like Weber, stressed that workers are dispossessed of the means of production and must sell their labour power to employers on the market in order to obtain their means of subsistence (in the form of wages). But unlike Weber, the Marxist concept of the working class also specifies that workers are subordinated to capital within the production process itself. They are systematically related to the capitalist class not only via the exchange relation in the market, but via the domination relation within production.

Classes are thus neither simply categories defined by the social relations which distribute economic resources, nor by the relations through which one group dominates another; they are defined by those appropriation relations which are simultaneously domination relations. Domination without appropriation or appropriation without domination do not constitute class relations.¹⁴

Within all of these strategies of concept formation—new demarcations, respecifications of demarcations, reaggregations and decoding dimensions—there is a great deal of trial and error. There are many false starts, many attempts at reformulating concepts which end up confusing matters more than clarifying them. When successful, however, the process of concept formation opens up new insights and possibilities within theories, enhances the explanatory capacity of the theory and points towards new research agendas.

Notes

1. Social changes can precipitate processes of concept formation for two reasons: first, such changes may simply require new concepts without bringing into question any existing concepts; or second, such changes may indicate that the original framework is itself inadequate and that existing concepts must be transformed. The two examples mentioned above are of the second variety.

2. *Pre-capitalist Modes of Production*, London 1979. Hindess and Hirst have subsequently repudiated some of the positions advanced in this book. Instead of simply arguing that the concept of the Asiatic mode of production is illegitimate, they now argue that the concept of mode of production itself should be abandoned and replaced with a simpler concept of relations of production.

3. *Ibid.*, p. 200.

4. For various positions on the implications of the debate over the labour theory of value, see Steedman, *et al.* eds., *The Value Controversy*, London 1981. My own position has shifted considerably in the course of the debate. Initially, in 'The Value Controversy and Social Research' (reprinted in *The Value Controversy*), I felt that the stakes were fairly high in the debate, since a rejection of the concept of labour values would undermine the concept of capitalist exploitation, which would in turn undermine the Marxist account of class relations in capitalism. My later position, elaborated in 'Reconsiderations' (a reply to criticisms of my original essay and also published in *The Value Controversy*) was that it was possible to sustain the conceptual core of the Marxist theory of exploitation and class without the formal apparatus of the labour theory of value.

5. These four strategies are not meant to be exhaustive by any means. There is also no implication that they all have the same logical status. Specifying the dimensionality of a concept, for example, will often involve more basic issues of the essential meaning of a concept than changes involving reaggregation of categories under more general rubrics. This list, therefore, is mainly intended to be suggestive of the kinds of strategies which can be pragmatically used in the process of concept formation. It does not aim to provide a comprehensive and philosophically ordered discussion of alternative strategies.

6. Examples of the major participants in this debate include, Immanuel Wallerstein, *The Modern World System*, New York 1974; Robert Brenner, 'The Origins of Capitalist Development: a Critique of Neo-Smithian Marxism', *New Left Review*, 104, July–August, 1977, pp. 25–93; Paul Sweezy, 'The Debate on the Transition: a Critique', in Rodney Hilton, ed, *The Transition from Feudalism to Capitalism*,

London 1976; Maurice Dobb, *Studies in the Development of Capitalism*, Cambridge 1963.

7. See chapter two of *Class, Crisis and the State*, London 1978, for an account of this debate.

8. This thesis has a long pedigree in the Marxist tradition. What the more recent conceptual elaboration has done is given it much more precision and rigour. See in particular Nicos Poulantzas, *Political Power and Social Class*, London 1973, and Göran Therborn, *What Does the Ruling Class Do When It Rules?*, London 1978.

9. Theda Skocpol has probably been the most articulate critic of the thesis that the diverse forms of the state that exist in capitalist societies can be meaningfully subsumed under some general concept of the 'capitalist state'. See, for example, 'Political Responses to Capitalist Crisis: Neo-Marxist Theories of the State and the Case of the New Deal', *Politics & Society*, vol. 10, no. 2, 1980; 'Bringing the State Back In: False Leads and Promising Starts in Current Theories and Research', in *Bringing the State Back In*, edited by Peter Evans, Theda Skocpol and Dietrich Rueschmeyer, Cambridge 1985.

10. This is not to suggest that the descriptive distinctions in a taxonomy are based on 'pure' data in an empiricist sense. The point is that the distinctions are undertheorized, often based on pragmatic 'commonsense' criteria.

11. A version of this typology was initially proposed in 'Modes of Class Struggle and the Capitalist State', by Gösta Esping-Anderson, Roger Friedland, and Erik Olin Wright, *Kapitalistate*, no. 4, 1976.

12. See W. S. Landecker, 'Class Boundaries', *American Sociological Review*, vol. 25, 1960, pp. 868-877; Stanislaus Ossowski, *Class Structure in the Social Consciousness*, London 1963; Seymour Martin Lipset, 'Social Stratification: Social Class', *International Encyclopedia of the Social Sciences*, D. L. Sills (ed), vol. 15, pp. 296-316; Rosemary Crompton and John Gubbay, *Economy and Society*, New York 1978; Gerhard Lenski, *Power and Privilege: A Theory of Social Stratification*, New York 1966.

13. See Erik Olin Wright, 'The Status of the Political in the Concept of Class Structure', *Politics and Society*, vol. 11, no. 3, 1982.

14. An example of the former is the relationship between prison guards and prisoners; an example of the latter is the relationship between children (who appropriate resources from parents) and parents. Except in special cases, neither of these would constitute a class relation.

Appendix II

Variable Constructions

In many ways the pivotal step in a research enterprise such as the one reported in this book is the construction of the operational variables used in the analysis. While variable construction is often treated simply as a pragmatic problem, and typically a boring one at that, it is frequently the case that the contours of the empirical results one observes are highly sensitive to the operational choices embedded in such constructions. This sensitivity applies both to the problem of question-design, which determines the 'raw variables' available in a particular set of data, and to the problem of data-aggregation, which determines the specific variables actually employed in the substantive analysis.

In this appendix I will lay out in considerable detail the ways in which the key variables used in the empirical analyses were constructed. This will both enable others to replicate the results presented in the book if they so desire, and will also make the operational choices as open to criticism as possible.

1 Basic Class Typology

The process of moving from the 'raw' variables on a survey questionnaire to a complex constructed variable as in the class typology used throughout this book involves many intermediate steps. The overall map of this aggregation process is presented in table II.1. The questionnaire items which constitute the basis for these aggregations are presented in table II.2. I will discuss each of the clusters of variables in this aggregation process in turn, giving both the rationale for the procedures adopted and their technical details.

1.1 ORGANIZATION ASSETS

The most complex problem of aggregation in the construction of this class typology concerned organization assets. As table II.1 indicates, this variable was built on three clusters of questionnaire items: items dealing with participation in decision-making, items dealing with authority and an item dealing with position within the

TABLE II.1
Overall steps in construction of class typology

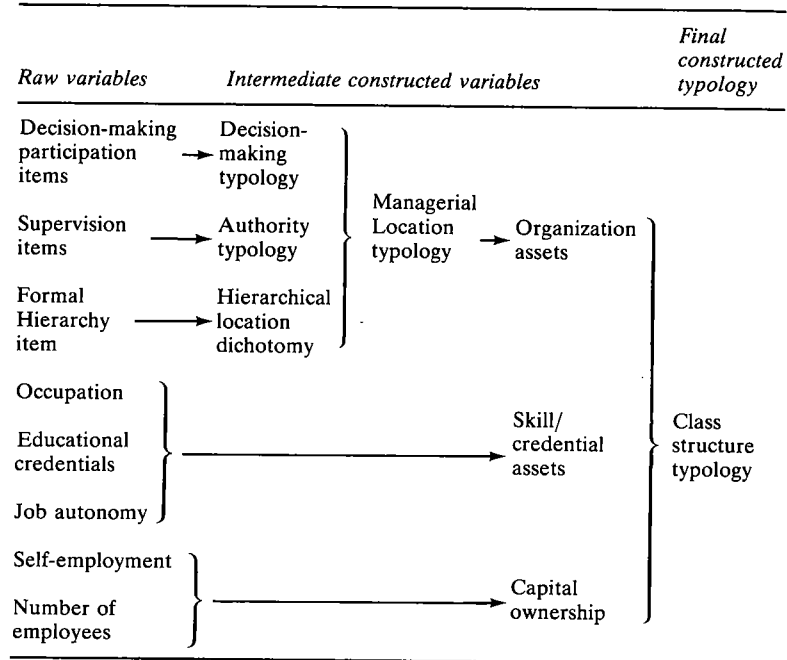


TABLE II.2
Raw variables that are inputs to constructing the class typology

Raw variables (Question numbers from US survey)	Content
1. Employment Status	
Self-employment (Question A7)	'Are you employed by <i>someone else</i> , are you <i>self-employed</i> , or do you <i>work without pay</i> in a family business or firm?'
Hidden self-employment (Question A8)	If respondents said that they work for someone else, and they indicate this is for a profit-making business, they were asked: 'Are you an owner or part owner of this firm? If they said 'Yes' they were asked a series of questions to determine if they were real owners/partners or just had nominal stock in the firm.'

TABLE II.2 (continued)

Raw variables (Question numbers from US survey)	Content
Number of employees (Questions A9, A17, A24).	Self-employed respondents and respondents who worked without pay in a family firm were asked 'About how many people are employed in this business on a permanent basis?'
2. Decision-making	
Decision-making filter (Question D1)	'The next question concerns policy-making at your workplace; that is, making decisions about such things as the products or services delivered, the total number of people employed, budgets, and so forth. Do you participate in making these kinds of decisions, or even provide advice about them?' [Response categories: YES, NO]
Decision-making items (Questions D2-D3)	Individuals who responded 'YES' to the general decision-making participation filter question, were then asked the following: 'Think of your specific place of work. If the organization for which you work has more than one branch, plant or store, think of the specific location where you work. I will ask you about decisions which might affect your workplace. For each, tell me if you are personally involved in this decision, including providing advice on it.'
	Respondents were then asked about the following specific types of decisions: (a) decisions to increase or decrease the total number of people employed in the place where you work. (b) policy decisions to significantly change the products, programs or service delivered by the organization. (c) decisions to change the policy concerning the routine pace of work or the amount of work performed in your workplace as a whole or some major part of it. (d) policy decisions to significantly change the basic methods or procedures of work used in a major part of the workplace. (e) decisions concerning the budget at the place where you work. (f) [if YES to budget decisions] decisions concerning the overall size of the budget.

Raw variables (Question numbers from US survey)	Content
	<p>(g) general policy decisions about the distribution of funds within the overall budget.</p> <p>(h) any other kinds of decisions important for the workplace as a whole [if YES, these are listed].</p> <p>For those types of decision in which the respondent indicated participation, they were then asked to indicate in which of the following ways they usually participated in making the decision:</p> <p>(1) make the decision on your own authority;</p> <p>(2) participate as a voting member of a group which makes the decision;</p> <p>(3) make the decision subject to approval;</p> <p>(4) provide advice to the person who actually makes the decision.</p>
3. Supervision	
Supervisor filter (Question C1)	'As an official part of your main job, do you supervise the work of other employees or tell other employees what work to do.' [Response categories: YES, NO]
Number of subordinates (Question C2)	Respondents who said that they were supervisors, were then asked how many people they directly supervised.
Subordinates' supervisory status Question C2b)	Supervisors were then asked if any of their subordinates had subordinates under them.
Subordinates' job (Question C2a)	If the supervisory respondent stated that they had only one subordinate, they were asked what that subordinate's main activities were. The purpose of this was to be able to identify people who supervised a single clerical employee.
Task authority items (Question C3)	Supervisors were asked to indicate whether or not they were directly responsible for any of the following: <p>(a) deciding the specific tasks or work assignments performed by your subordinates.</p> <p>(b) deciding what procedures, tools, or materials your subordinates use in doing their work.</p> <p>(c) deciding how fast your subordinates work, how long they work or how much work they have to get done.</p> <p>[Response categories for each of these: YES, NO].</p>
Sanctioning authority items (Questions C4-C6)	Supervisors were asked if they had any influence over a number of possible sanctions that could be imposed on subordinates. If they said they did have any influence on

Raw variables (Question numbers from US survey)	Content
	<p>a given sanction, they were then asked whether they or someone higher up in the organization had the greatest influence. The sanctions were:</p> <p>(a) granting a pay raise or promotion to a subordinate.</p> <p>(b) preventing a subordinate from getting a pay raise or promotion because of poor work or misbehaviour.</p> <p>(c) firing or temporarily suspending a subordinate.</p> <p>(d) issuing a formal warning to a subordinate.</p>
4. Formal hierarchical position	
Formal position in managerial hierarchy (Question D4)	All wage earners, whether or not they indicated that they participated in policy decision-making or were supervisors, were asked the following: 'Which of the following best describes the position which you hold within your business or organization? Would it be a managerial position, a supervisory position, or a non-management position? Respondents who indicated that it was a 'managerial position' were then asked: 'Would that be a top, upper, middle or lower managerial position?'
5. Autonomy	
Autonomy filter (Question B1)	All wage-earners were asked the following: 'Is yours a job in which you <i>are required</i> to design important aspects of your own work and to put your ideas into practice. Or is yours a job in which you are <i>not required</i> to design important aspects of your work or to put your ideas into practice, except perhaps in minor details?'
Degree of autonomy (Question B2)	<p>Respondents who stated that they were required to design their own work, were then asked 'Could you give me an example of how you design your work and put your ideas into practice?' and a verbatim response was recorded. These responses were then coded into the following categories:</p> <p>1 = high autonomy</p> <p>2 = probably high autonomy</p> <p>3 = intermediate autonomy</p> <p>4 = probably intermediate autonomy</p> <p>5 = low autonomy</p> <p>6 = no autonomy (i.e. a negative response on the initial filter question, B1)</p>
	[Definitions of these categories are given in Table II.4]

formal managerial hierarchy. Table II.3 indicates the details of how these clusters were constructed and aggregated.

Decision-making. In constructing the decision-making scale, several strategic choices had to be made: should we differentiate among the *kinds* of policy decisions a person might make? For example, participation in budgetary decisions or decisions about what to produce could be seen as more central to the problem of organization assets than participation in decisions about the pace of work. Should we differentiate individuals on the basis of the *number* of different kinds of decisions in which they participate? Should the *form* of participation enter into the construction of the variable? Making a decision on one's own authority could be viewed as involving 'more' control over organization assets than participating in a decision as a voting member of a group. In the present analysis, I opted for the solution that was conceptually the simplest to these issues: all of the policy decisions in the list in table II.2 were considered equal; no distinction was made on the basis of how many kinds of decisions an individual participated in; the only distinction in forms of participation was between people who only provide advice and people who are directly involved in making the decision itself. The result is the three-category decision-making participation typology in table II.3: decision-makers, advisors, non-decision-makers. While in future work it would certainly be useful to add refinements into this simple aggregation, it seemed desirable to begin the analysis with a less complex set of distinctions.

Authority. The authority questions posed many of the same problems as the decision-making questions. In particular, there were three interconnected issues which had to be resolved. First, we asked supervisors a series of questions about the kinds of sanctions they could impose on subordinates. In constructing the authority variable, therefore, we had to decide whether to differentiate supervisors on the basis of the *number* of different kinds of sanctions they could impose, the specific *form* of the sanctions available to them, the relationship between their ability to impose sanctions and their superiors' ability so to do. Second, we asked supervisors about the kinds of tasks of their subordinates for which they were responsible. Should we distinguish individuals on the basis of the number and kinds of tasks for which they had supervisory responsibilities? Finally, in combining 'sanctioning authority' and 'task authority', do we want to distinguish individuals who are

TABLE II.3
Variable constructions for organization assets

1. Decision-making				
Input variables				Constructed variable
Decision-making filter	Individual decision-making items			Decision-making participation typology
NO	x ^a			1. Non-decision-maker
YES	Provides advice on decision but directly participates in none			2. Advisor
YES	Participates directly in making any one of the decision making items			3. Decision-maker
2. Authority				
Input variables				Constructed variable
Supervision filter	Has only one clerical subordinate who does not have any subordinates	Task authority items	Sanction authority items	Authority typology
NO	x ^a	x	x	1. Non-supervisor
YES	YES	x	x	1. Non-supervisor
YES	NO	NO	NO	2. Nominal supervisor
YES	NO	YES	NO	3. Task supervisor
YES	NO	x	YES	4. Sanction supervisor

TABLE II.3 (continued)

3. Managerial location typology			
Input variables			Constructed variable
Decision-making typology	Authority typology	Manager or supervisor in formal organization hierarchy	Managerial location typology
3	3 or 4	YES	1. Manager on all criteria
3	3 or 4	NO	2. Manager not in formal hierarchy
3	1 or 2	YES	3. Non-supervisory manager
3	1 or 2	NO	4. Non-supervisory decision-maker not in formal hierarchy
2	3 or 4	YES	5. Advisor-manager on all criteria
2	3 or 4	NO	6. Advisor not in hierarchy
2	1 or 2	YES	7. Non-supervisory advisor
2	1 or 2	NO	8. Non-supervisory advisor not in formal hierarchy
1	4	YES	9. Sanctioning supervisor
1	3	YES	10. Task supervisor
1	2	YES	11. Nominal supervisor in hierarchy
1	4	NO	12. Sanctioning supervisor not in formal hierarchy
1	3	NO	13. Task supervisor not in hierarchy
1	1	YES	14. No subordinates but in hierarchy
1	1 or 2	NO	15. Non-supervisor/non-manager on all criteria
4. Organization assets			
Managerial location typology	Organization asset typology		
1-3, 5-7	1. Manager		
9-12	2. Supervisor		
4, 8, 13-15	3. Non-management		

^ax = criterion inapplicable

involved in both of these kinds of authority from individuals involved in only one or the other?

As in the case of the decision-making variables, I opted for fairly simple solutions to these issues. For sanctioning authority, the only distinction made is between supervisors who can impose at least one kind of sanction and those who cannot impose any. If a supervisor can only issue formal warnings, this is not considered as being able to impose a real sanction. No distinction was made between supervisors who say that their superiors have more influence than they do on such sanctions and supervisors who say that they have the greatest influence. For task authority, no distinctions were made on the basis of the number and kind of tasks. In the aggregation of the two kinds of authority, no distinction was made between individuals with both kinds of authority and those who reported only sanctioning authority. In effect I was assuming that all people with sanctioning authority would have some kind of task responsibilities, even if our survey questionnaire failed to measure them. Respondents with task authority but no sanctioning authority, however, were distinguished from those with sanctioning authority. The result of these combinations is the four-category authority typology indicated in table II.3: sanctioning supervisors, task supervisors, nominal supervisors and non-supervisors.¹

There is one additional wrinkle in the construction of the authority variable. There are work settings in which certain individuals receive 'orders' from many other employees without really being supervised by them. A typical example is a typist in a typing pool who may receive things to type from many people but be supervised by a clerical supervisor of the pool itself. In such situations we do *not* want the people who give the typing to the typist to say that they are supervisors. In effect, we wanted to eliminate from the supervisor category individuals who had only one subordinate who was a clerical employee without any subordinates himself or herself. There were twenty-four such individuals in the US sample.

Formal Hierarchy. Initially we included the formal hierarchy question in the survey as a kind of methodological check on the decision-making and supervision questions. The plan was not to use it directly in building the class typology, but rather as a way of testing the validity of the other questions. In the end, however, it seemed appropriate to use this variable as an additional 'indicator' of the respondents' location within the managerial structure. For purposes of the construction of the class typology, this question

was collapsed into a dichotomy: manager-supervisors versus non-management.

Managerial-Location Typology. From a strictly *a priori* conceptual point of view, the three constructed variables that served as inputs to this typology—decision-making, authority and hierarchy—should be ordered as a kind of ‘Guttman Scale’. That is: everyone who is a decision-maker should have authority and be in the hierarchy; everyone who has authority, but is not a decision-maker should also be in the hierarchy; and the only people in the hierarchy who are not decision-makers and who do not have authority should be nominal supervisors. The formal hierarchy variable, then, should in principle be redundant, and there should be perfect consistency between the decision-making and authority variables.

As anyone with experience in survey data analysis would have guessed, the data were not so neat. There were respondents who appeared to be centrally involved in many kinds of decision-making who said that they did not have any authority over subordinates, and some who even said that they occupied non-management positions in the formal hierarchy; there were people who said that they were upper managers in the formal hierarchy but who were involved in no policy decisions; there were people who could impose severe sanctions on subordinates who claimed not to occupy a position in the managerial-supervisory hierarchy; and so on. To be sure, the large majority of respondents had consistent responses as expected, but many inconsistencies occurred in the data.

Such inconsistencies are the results of two kinds of problems. First there are ‘measurement problems’ of various sorts: people misunderstand the questions, interviewers write down the wrong response, the question is badly worded so that it misses some important alternative, etc. Secondly, there are in fact real situations in the world that do not fit into the conceptual categories embedded in the survey. In some work settings, for example, there may have developed the kind of collaboration of managers and workers such that workers legitimately respond that they are directly involved in certain kinds of decision-making without having authority or being in the hierarchy. This could be the kind of informal co-operation that is sometimes found in small shops and factories, or the more formal ‘co-determination’ that is being experimented with in certain corporations.

It is an important, and often very productive, empirical task to

explore in some depth these ‘inconsistent’ combinations of criteria with an eye to distinguishing the measurement problems from the substantive complexities. In the present analysis, however, I have not engaged in such a task. I have thus used the formal hierarchy variable as a way of ‘correcting’ anomalies in the combination of the decision-making and authority variables. For example, a respondent who says that they participated directly in policy decisions (a decision-maker on the decision-making variable), but who was a nominal supervisor or non-supervisor on the authority variable, would still be classified as a manager if they were in the managerial-supervisory hierarchy on the formal hierarchy variable.

Organization Assets. The final task was to collapse the managerial-location typology into a simple trichotomy to be used in the class structure matrix. Where should the lines of demarcation be drawn in this collapsed variable? Should task supervisors who are not in the formal hierarchy be considered ‘supervisors’? Should decision-makers who are not in the hierarchy and who do not have subordinates be considered managers? Where should advisor-managers be placed? These decisions, it must be emphasized again, are not inconsequential—the pattern of results are potentially affected by them.

My solution to these issues was to aggregate the categories in the managerial-location typology in such a way that I would have considerable confidence that both the manager location and the non-management location were internally homogeneous. The intermediate category—supervisors—is thus a combination of respondents who appear to genuinely have control over marginal levels of organization assets, and respondents for whom there are likely to be problems of measurement error. The allocation decisions are indicated in table II.3.

1.2 SKILL/CREDENTIAL ASSETS

The aggregation problem was less complex for skill assets than for organization assets, although as we discussed in chapter four, the conceptual problems are perhaps more difficult. In principle, skill/credential assets should be measured by the incumbency in jobs which require scarce skills, particularly credentialled skills.² In practice, at least with the data which we used in this project, the level of detail in occupational descriptions and coding was insufficient to unambiguously define the credentialled character of jobs. As a result I have deployed two other criteria in combination with

occupational titles to define skill assets: formal educational credentials and, more problematically, job autonomy. In both cases these criteria are invoked when the occupational categories are too broad or diffuse to give us a satisfactory basis for judging the skill/credential assets involved. The particular way in which these additional criteria are combined with occupational titles is presented in table 5.3.

The coding of occupational title and educational credentials are entirely conventional and straightforward and do not require any specific commentary here. Some discussion of the coding of 'autonomy', however, is necessary.

Job Autonomy. The rationale for using job autonomy as a criterion for *skill* assets is that for those occupational titles, such as sales or clerical jobs, which are particularly diffuse in the real skill content of the job, the degree of conceptual autonomy in the job is likely to be a good indicator of the skill assets attached to the job. The argument is not that autonomy as such is an asset, but that it may be a good indirect indicator of such assets in what would otherwise be an ambiguous situation. It should be noted that in the present analysis, the autonomy criterion is used only to distinguish marginal skill assets from fully uncredentialed positions; it is not a criterion for defining expert positions at all.

The basic strategy for operationalizing job autonomy is as follows. All wage-earning respondents were first asked the general filter question about conceptual autonomy within work indicated in table II.2.³ This filter question enabled us to identify those respondents who *claimed* to have conceptual autonomy within work. Our assumption—which is certainly open to question—was that everyone who indeed really had such autonomy would also subjectively think they had it, but that some people who lacked conceptual autonomy would claim to have it as well. We assumed, in other words, that we faced a problem of 'false positives', but not 'false negatives'.⁴ The task, then, was to eliminate these false positives, these 'inflated' assessments of conceptual autonomy.

This task of eliminating exaggerated claims to autonomy was accomplished by asking respondents to give an example of how they designed their own work and put their ideas into practice on the job. We then coded these examples on a scale indicating the degree of conceptual autonomy they suggested.⁵ The coding of examples into this scale involved two steps: first, we made the best guess we could of the 'level' of conceptual autonomy involved in the example—high, medium or low (to be defined below). Then

we indicated how confident we were in that guess. The confidence code was not meant to be an intermediate code between two levels (although in practice it sometimes functioned in that way), but rather an indication of how adequate we felt the information to be in making our judgement. For the purposes of the present analysis, all respondents who scored medium or high levels of autonomy regardless of the level of confidence in the coding were considered incumbents of autonomous jobs.

Given this coding strategy, the problem was to develop a set of coding rules for distinguishing high, medium and low autonomy that were sufficiently clear and comprehensive that we could attain acceptably high reliability in the coding of the examples. Table II.4 indicates the essential definitions we developed for these levels of autonomy. In addition, coders were given more detailed instructions about how these general definitions applied to specific occupational settings.⁶

Once we elaborated these detailed coding instructions, we had three people code all of the examples: two coders who had some theoretical knowledge of the objectives of the coding and one who was 'naive'. As it turned out, the naive coder agreed with the sophisticated coders as frequently as they agreed with each other. In terms of overall reliability, there was an average complete agreement between pairs of coders in 80.1 per cent of the examples, a discrepancy of only 1 point in 18.4 per cent of the cases and a discrepancy of two or more points in a further 1.5 per cent. In 91.1 per cent of the cases there was either complete agreement or only disagreement on the degree of certainty in the code (rather than the 'level' of autonomy). Where disagreements occurred, the final codes adopted were the result of a consensus among the coders after a case-by-case discussion of the disagreements.

There are many objections that can be raised against this autonomy variable. However, in the present context I do not think that these are likely to undermine the usefulness of the variable, given that it enters the construction of the skill-asset variable in such a narrow way. The autonomy variable effects the skill—asset allocations only for those sales and clerical employees with at least a college education in the United States and a high-school education in Sweden.

1.3 CAPITAL ASSETS

In a more complex analysis than the one pursued in this book it would be desirable to distinguish between people who were

TABLE II.4
Definitions of autonomy coding categories

<i>Autonomy code for respondent's examples of autonomy</i>	<i>Interpretation</i>
1 High	Design/plan significant aspects of the <i>final product or service</i> , not just procedures used in one's own work. OR Problem-solving with non-routine solutions is a central aspect of the work, not just an occasional event.
2 Probably high	Same as 1, only less certain about the coding.
3 Medium	Design/plan most of the procedures used in one's work, but only have influence on very limited aspects of the final product or service. OR Problem-solving is a regular aspect of work, but generally of a routinized character <i>or</i> not a central activity in one's work.
4 Probably medium	Same as 3, only less certain about the coding.
5 Low	Design or plan <i>at most</i> a limited aspect of procedures with virtually no influence over aspects of the final product or service. OR Problem-solving is at most an occasional/marginal aspect of work.
6 None	Very marginal involvement with designing procedures. Most work activities highly routinized with rare problem-solving.

capitalist exploiters (i.e. exploiters on the basis of sheer ownership of capital) and individuals who occupied capitalist class locations (i.e. were employers within the capital-labour relation). This would imply, for example, looking at the capital ownership of managerial wage-earners as well as including pure rentier capitalists in the analysis.

In the present investigation we have ignored these added complexities. Exploitation based on capital assets is therefore directly

linked to the capital-labour social relation. The central criteria for the analysis are therefore: self-employment and number of employees. These criteria are used to distinguish among four categories: wage-labourers, petty bourgeois (self-employed with no more than one employee), small employers (two to nine employees), and capitalists (ten or more employees). The dividing line between capitalists and small employers is obviously an arbitrary one, and in any event the capitalists in the sample are themselves generally quite small capitalists.

There is one final nuance in the construction of this dimension of the class structure matrix. There are individuals who are wage earners in a formal sense, but who nevertheless are genuine owners of the business in which they work, either as partners or, sometimes, even as sole owners. Through incorporation a capitalist can become an employee of his or her own business. Such people should be considered self-employed in terms of the theoretical categories of this study, and we therefore asked a series of questions specifically designed to identify such positions. In the US survey this resulted in a re-classification of twelve individuals (about one per cent of the wage-earners in the sample).

2 Poulantzas's Class Typology

Poulantzas's class typology is built around the intersection of three basic criteria: productive-unproductive labour, manual-mental labour, and supervision. Of these, the most problematic is the first. Particularly in terms of occupations, there are many cases where it is quite ambiguous whether or not a particular position should be considered productive or unproductive in Poulantzas's terms. In classifying occupations in terms of the productive-unproductive-labour distinction in table II.5, therefore, I have explicitly introduced an 'ambiguously productive category'. In constructing an unproductive labour variable for operationalizing Poulantzas's concept of class the ambiguous category has been combined with the productive occupations. In the actual data analysis I experimented with a variety of operational choices, and none of the results are substantively affected.

3 Industrial Sector Classification System

Table II.6 indicates the basic classification system used in the analyses involving industrial sectors. The central novelty of this

TABLE II.5
Productive and unproductive labour categories used in constructing
Poulantzas's definition of the working Class

Productive occupants	Architects, engineers (except sales engineers), foresters and conservationists, engineering and science technicians, tool programmers, designers, editors and reporters, craftsmen, operatives, transport equipment operators, labourers (except gardeners), farmers and farm labourers, cooks.
Ambiguous occupations	Computer specialists, mathematical specialists, life and physical scientists, veterinarians, pilots, air traffic controllers, physicians, unspecified technicians, unspecified research workers, ship pilots, foremen, farm foremen, dishwashers, food counter and fountain workers.
Unproductive occupations	Accountants, sales engineers, farm management advisors, home management advisors, lawyers and judges, personnel and labour relations workers, physicians, dentists and related practitioners, nurses and therapists, religious workers, social scientists, social workers, teachers, embalmers, radio operators, vocational counsellors, writers, artists and entertainers, managers and administrators, sales workers, clerical and kindred workers, armed forces, parking attendants, taxicab drivers and chauffeurs, garbage collectors, unpaid family workers, cleaning service workers, waiters, health service workers, personal service workers, protective service workers, private household workers.
Productive economic sector	Agriculture, mining, construction, manufacturing, transportation of goods (i.e. all transportation except taxis and buses), utilities (if private sector).
Unproductive economic sector	State employment, transportation of people, wholesale and retail sales, finance, business services, personal services, entertainment and recreation, public administration.
Unproductive labour = Unproductive occupation <i>or</i> unproductive sector	
Productive labour = Productive <i>or</i> ambiguous occupation <i>and</i> productive sector	

classification system, based on the work of Joachim Singelmann, is that it differentiates the amorphous 'service sector' of most analyses into several distinct sectors based on their functional role in the economic system.⁷

TABLE II.6
Industrial classification categories

<i>Industrial sector</i>	<i>Detailed industries included in the sector</i>
1. Extractive	Agriculture, mining, fishing.
2. Transformative	Construction, food processing, textiles, metal, machinery, chemical, miscellaneous manufacturing, utilities.
3. Distributive services	Transportation, communication, wholesale, retail.
4. Business services	Banking, insurance, real estate, engineering, accounting, miscellaneous business services.
5. Personal services	Domestic services, hotels, eating and drinking, repair, laundry, barber and beauty shops, entertainment, miscellaneous personal services.
6. Social and political services	Legal services, medical services, hospitals, education, welfare, non-profit, postal services, government, miscellaneous social services.

4 Class Biography Variables

Table II.7 presents the basic variable constructions for the class biography variables used in the analysis of class consciousness in chapter seven. The basic task of these variable constructions was to create one variable tapping salient feature of the individual's current class context other than their actual class location, and another variable tapping feature of their class trajectories.

The working class networks variable is composed of two elements. The first is a measure of the working-class density of the respondent's social networks, based on data concerning the class location of friends and spouse (if the respondent had a spouse in the labour force); the second is defined by the class location of the respondent's second job, if any—about 15 per cent of the US sample have second jobs. These two variables are combined as indicated in the matrix in table II.7.4. In this constructed variable, the social network variable has considerably more weight than the second job variable, on the assumption that social ties are likely to reflect a

TABLE II.7
Construction of class biography variables

1. Class variable for: Friends ^a , spouse, parent ^b , second job ^c			
Input variables			Constructed variable
Occupation	Management or supervisor position	Self-employed	Class
Professional, technical, managerial	or YES	or YES	Non-working class
Other occupations	and NO	and NO	Working class

^aRespondents were asked a series of questions about the jobs of the three friends or relatives they felt personally closest to. If a friend/relative was not currently working, the question was asked about their prior job. If this friend had never worked, but was married, the question was asked about their spouse.

^bThe question about parent's job was asked for the person who the respondent said 'provided most of the financial support in your family while you were growing up.' Usually this was the father. The job information was not pegged to a particular age, but to the main occupation of the parent during the period while the respondent was growing up.

^cFor the respondent's second job, the question about occupying a management or supervisor position was not asked and thus does not enter into the construction of the second job class variable.

2. Social network links to the working class

Class of friends = 0 if none are workers, 1 if one is a worker, 2 if two are workers, 3 if all three are workers

Class of spouse = 1 if spouse is a worker, 0 for all other cases (spouse is not a worker, spouse does not work or does not have a spouse)

$$\% \text{ working class links} = \frac{[\text{Class of friends} + \text{class of spouse}]}{\text{Number of possible links}}$$

Working class links scale:

- 0 if % links = 0
- 1 if % links = 1-49%
- 2 if % links = 50%
- 3 if % links = 51-99%
- 4 if % links = 100%

TABLE II.7 (continued)

3. Prior working class job history		
Input variables		Constructed variable
Ever self-employed? ^a	Ever a supervisor? ^b	Working class past jobs
NO	NO	1. Always a worker
NO	YES	2. Supervisor in the past
YES	NO or YES	3. Self-employed in the past

^aPeople who are *currently* self-employed were not asked whether they had been self-employed in any prior job (because of an error in questionnaire design). I have therefore assumed that the answer is 'YES' for currently self-employed respondents.

^bPeople who are *currently* supervisors or who are currently self-employed were not asked whether they had held a supervisory position on a prior job (because of an error in questionnaire design). I have therefore assumed that the answer is 'YES' for respondents who are currently classified as supervisors.

4. Working class networks

Entries in the cells of the matrix are values of the constructed variable, working class networks

		Working class links scale				
		4	3	2	1	0
Class of second job	Working class job	10	9	7	5	3
	No second job	10	8	6	4	2
	Non-working class job	8	7	5	3	1

TABLE II.7 (continued)

5. Working class trajectory

Entries in the cells of the matrix are values of the constructed variable, working class trajectory

		Working class past jobs		
		Always a worker	Have been a supervisor	Have been self-employed
Class origin	Working class	6	4	2
	Not working class	5	3	1

more pervasive and long term property of a person's class context than a second job.

The working-class-trajectory variable is also composed of two elements: one indicating the respondent's class origins, the other indicating whether or not the respondent has ever been self-employed or a supervisor. There was an error in the questionnaire design which affects this second dimension of the variable. Ideally we would have liked to know for every respondent, regardless of their present class location, whether or not they had been self-employed or a supervisor on some past job. This would have enabled us rigorously to distinguish the effects of one's present location from past trajectory. Unfortunately, we only asked employees the past self-employment question, and non-supervisory employees the past supervision question. I do not think that this seriously compromises the usefulness of the working class trajectory variable, but it does make it a less rigorous measure than one would have liked.

Notes

1. 'Nominal supervisors' are, in principle, individuals who are channels of communication from above but who have no real authority over subordinates, i.e. they

cannot either impose sanctions on them or order them to do anything. In the questionnaire, however, there will be a certain amount of measurement error in the distinction between nominal supervisors and task supervisors, since we did not ask supervisors a completely comprehensive list of tasks.

2. Since a skill-credential only becomes the basis for exploitation when it is productively deployed, the sheer possession of a credential is insufficient to define the location of a person within the relations of exploitation. A Ph.D. in chemistry working on an assembly line is not a credential exploiter.

3. Self-employed respondents were not asked this question on the United States and Swedish surveys. It would have been useful to have asked this question of everyone, but we did not. In some of the subsequent national surveys the autonomy questions were asked of all respondents.

4. The Canadian survey asked a series of follow-up questions to people who said that they did not have conceptual autonomy on the filter question in order to check for false negatives. When these data are analysed we will be able to see how inaccurate our assumption was.

5. Where the information in the example was too thin for coding we looked at the general job descriptions provided by respondents in response to the survey question about their occupation. In many cases it was possible to use this information to code autonomy when the autonomy examples were too vague or unclear.

6. In some cases the examples were simply too vague to provide us with sufficient information to make the required distinctions. This was particularly the case for school teachers and policemen. While this may certainly be open to criticism, in these two cases we relied on our general knowledge of the occupational conditions of such jobs and assigned all the respondents in that occupation who claimed to have conceptual autonomy 'high' autonomy scores. The full details of these coding instructions can be found in the public use codebook for the *Comparative Study of Class Structure and Class Consciousness*.

7. See Joachim Singelman, *From Agriculture to Services*, Beverley Hills 1978.

Full Data for Selected Tables

TABLE III.1
Distribution of classes within sex categories, United States and Sweden

Class categories	Distribution of sexes within classes		Sweden		United States		Sweden		United States		Sweden	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
	Distribution of classes within within sexes											
1. Capitalists	79.3	20.7	100.0	0.0	2.7	0.8	1.2	0.0	2.7	0.8	1.2	0.0
2. Small employers	66.7	33.3	80.7	19.3	7.4	4.4	7.0	2.1	7.4	4.4	7.0	2.1
3. Petty bourgeois	50.3	49.7	75.7	24.3	6.4	7.5	7.3	3.0	6.4	7.5	7.3	3.0
4. Expert manager	75.0	25.0	87.4	12.6	5.4	2.1	6.8	1.3	5.4	2.1	6.8	1.3
5. Expert supervisor	70.3	29.7	42.9	57.1	4.8	2.4	2.9	4.9	4.8	2.4	2.9	4.9
6. Expert non-manager	47.7	52.3	56.1	43.9	3.0	3.9	6.8	6.8	3.0	3.9	6.8	6.8
7. Semi-credentialled manager	77.4	22.6	84.2	15.8	8.8	3.0	6.1	1.4	8.8	3.0	6.1	1.4
8. Semi-credentialled supervisor	75.6	24.4	76.7	23.3	9.5	3.6	4.4	1.7	9.5	3.6	4.4	1.7
9. Semi-credentialled worker	73.6	26.4	63.4	36.5	16.6	7.1	20.2	14.8	16.6	7.1	20.2	14.8
10. Uncredentialled manager	31.0	69.0	51.2	48.8	1.3	3.5	30.9	59.6	1.3	3.5	30.9	59.6
11. Uncredentialled supervisor	41.4	58.6	76.1	23.9	5.2	8.8	4.2	1.7	5.2	8.8	4.2	1.7
12. Proletarian	39.5	60.5	39.8	60.2	29.0	52.8	30.9	59.6	29.0	52.8	30.9	59.6
Totals	54.3	45.7	56.0	44.0								
Weighted N	807	680	660	519								

TABLE III.2
Class distribution within age-sex categories

I. United States	Age categories													
	<21	21-25	26-35	36-45	46-55	56-65	>65	<21	21-25	26-35	36-45	46-55	56-65	>65
1. Capitalists	Men 0.0	0.0	1.5	3.3	4.4	3.2	13.5	Men 0.0	1.1	0.4	2.0	0.0	0.0	1.4
	Women 1.6	1.1	0.4	2.0	0.0	0.0	1.4	Men 4.8	4.8	6.3	8.5	9.2	9.7	9.6
2. Small employers	Men 0.0	2.1	5.2	7.7	4.1	3.6	3.5	Women 0.0	4.6	3.8	3.8	5.0	13.8	8.8
	Women 4.5	3.2	5.5	6.1	8.2	8.7	24.5	Men 0.0	4.1	6.3	6.6	5.6	6.0	5.0
3. Petty bourgeois	Men 0.0	2.3	3.6	1.5	2.4	2.1	0.0	Women 0.0	2.3	3.6	1.5	2.4	2.1	0.0
	Women 1.4	3.4	5.9	7.9	4.1	2.8	1.8	Men 2.2	1.1	2.7	4.3	3.4	0.6	0.0
4. Expert manager	Men 5.8	4.0	4.5	2.6	0.6	1.5	1.8	Women 3.1	4.9	4.5	2.6	0.6	1.5	1.8
	Women 7.2	5.5	10.0	13.1	10.0	4.0	3.2	Men 2.7	3.9	3.6	3.7	1.0	3.9	1.4
5. Expert supervisor	Men 7.1	12.5	8.1	11.6	11.5	6.5	1.5	Women 7.1	12.5	8.1	11.6	11.5	6.5	1.5
	Women 0.0	4.8	5.5	3.5	2.9	1.7	3.4	Men 29.6	14.3	20.7	14.8	15.0	8.5	9.1
6. Expert non-manager	Men 0.0	1.5	1.1	0.7	0.5	0.0	4.1	Women 0.0	12.8	9.6	5.7	4.2	6.3	5.5
	Women 8.6	7.1	3.3	3.3	2.7	0.0	9.7	Men 1.5	3.4	1.1	0.7	0.5	0.0	4.1
7. Semi-credentialled manager	Men 8.6	7.1	3.3	3.3	2.7	0.0	9.7	Women 0.0	6.5	3.3	3.3	2.7	0.0	9.7
	Women 14.3	6.8	8.6	6.9	13.5	10.3	0.0	Men 8.6	7.1	5.7	3.1	3.6	7.6	0.0
8. Semi-credentialled supervisor	Men 36.7	35.3	21.4	23.9	30.5	36.5	41.8	Women 14.3	6.8	8.6	6.9	13.5	10.3	0.0
	Women 69.0	51.5	48.5	51.0	53.6	59.1	47.9	Men 69.0	51.5	48.5	51.0	53.6	59.1	47.9
9. Semi-credentialled worker	Men 58	123	224	151	135	82	34	Women 45	95	164	128	116	81	51
10. Uncredentialled manager	Men 58	123	224	151	135	82	34	Women 45	95	164	128	116	81	51
11. Uncredentialled supervisor	Men 58	123	224	151	135	82	34	Women 45	95	164	128	116	81	51
12. Proletarian	Men 58	123	224	151	135	82	34	Women 45	95	164	128	116	81	51
Weighted N	Men 58	123	224	151	135	82	34	Women 45	95	164	128	116	81	51

TABLE III.2 (continued)

II. Sweden		<21	21-25	26-35	36-45	46-55	56-65
1. Capitalists	Men	0.0	0.0	1.1	0.7	3.2	1.1
	Women	0.0	0.0	0.0	0.0	0.0	0.0
2. Small employers	Men	2.8	3.9	5.1	11.9	6.3	7.6
	Women	0.0	0.0	0.8	5.6	1.9	2.0
3. Petty bourgeois	Men	2.8	3.9	4.0	7.3	11.9	12.0
	Women	0.0	3.6	1.6	3.7	2.9	5.9
4. Expert manager	Men	0.0	0.0	8.5	8.6	9.5	5.4
	Women	0.0	0.0	1.6	1.9	1.0	0.0
5. Expert supervisor	Men	0.0	3.9	2.3	2.6	6.3	0.0
	Women	0.0	1.8	11.0	3.7	3.9	0.0
6. Expert non-manager	Men	0.0	11.7	10.2	6.0	3.2	5.4
	Women	11.5	3.6	10.2	2.8	4.8	11.8
7. Semi-credentialed manager	Men	0.0	5.2	6.8	8.6	5.6	4.3
	Women	0.0	1.8	3.2	0.0	0.9	1.8
8. Semi-credentialed supervisor	Men	2.8	1.3	6.3	4.0	4.8	4.3
	Women	0.0	0.0	0.8	1.9	3.9	2.0
9. Semi-credentialed worker	Men	27.8	20.8	23.9	19.9	17.5	14.1
	Women	11.5	10.7	21.2	21.4	8.7	3.9
10. Uncredentialed manager	Men	2.8	2.6	1.7	2.0	3.2	2.2
	Women	3.8	3.6	2.4	2.8	2.9	2.0
11. Uncredentialed supervisor	Men	0.0	6.5	2.8	3.3	1.6	12.0
	Women	0.0	0.0	1.6	1.9	2.9	2.0
12. Proletarian	Men	61.1	40.3	27.3	25.2	27.0	31.5
	Women	73.1	75.0	45.7	54.3	66.4	68.8
Weighted N	Men	36	77	176	151	126	92
	Women	29	62	140	118	114	56

TABLE III.3
Class distributions within race-sex categories, United States

	Race-sex categories			
	White men	White women	Black men	Black women
1. Capitalists	2.9	0.8	2.0	0.0
2. Small employers	8.2	4.9	6.7	0.0
3. Petty bourgeois	6.4	8.9	7.5	3.7
4. Expert manager	5.7	2.0	4.0	1.4
5. Expert supervisor	4.4	2.4	3.5	2.4
6. Expert non-manager	3.0	4.4	3.6	4.0
7. Semi-credentialed manager	9.8	4.0	7.2	5.5
8. Semi-credentialed supervisor	9.2	3.8	6.8	8.2
9. Semi-credentialed worker	16.7	6.9	12.3	21.4
10. Uncredentialed manager	1.5	3.5	2.4	1.0
11. Uncredentialed supervisor	4.7	8.7	6.5	4.5
12. Proletarian	27.4	49.7	37.3	47.8
Weighted N	648	517	1165	71
				78
				149

TABLE III.4
Distribution of class within economic sectors, United States and Sweden

Classes	Economic sector ^a					
	Extractive	Transformative	Distributive services	Business services	Personal services	Social and political services
<i>I. United States</i>						
1. Capitalists	3.3	1.3	5.1	1.2	3.8	0.3
2. Small employers	27.9	4.6	8.7	7.0	10.7	1.4
3. Petty bourgeois	17.9	4.3	7.3	10.9	16.2	3.0
4. Expert manager	1.2	3.0	3.3	4.7	0.9	6.8
5. Expert supervisor	2.5	3.0	1.9	6.0	1.5	5.9
6. Expert non-manager	0.0	2.6	1.5	2.2	0.7	7.6
7. Semi-credentialed manager	0.0	6.9	7.8	5.9	3.8	6.8
8. Semi-credentialed supervisor	10.0	7.5	6.7	6.5	1.4	8.0
9. Semi-credentialed worker	8.3	14.3	6.7	4.2	7.1	17.1
10. Uncredentialed manager	3.7	0.6	1.3	2.2	6.7	3.0
11. Uncredentialed supervisor	2.3	6.8	8.3	10.1	6.7	5.3
12. Proletarian	22.8	45.1	41.5	39.0	40.4	34.8

TABLE III.4 (continued)

Classes	Economic sector ^a					
	Extractive	Transformative	Distributive services	Business services	Personal services	Social and political services
<i>II. Sweden</i>						
1. Capitalists	0.0	1.5	1.0	1.2	3.8	0.3
2. Small employers	18.0	5.3	13.9	11.1	5.5	1.2
3. Petty bourgeois	36.2	4.9	5.2	8.6	9.6	0.2
4. Expert manager	0.0	3.6	1.9	16.7	2.8	5.8
5. Expert supervisor	0.0	2.1	0.0	0.0	0.0	8.1
6. Expert non-manager	1.6	4.7	3.1	11.7	4.3	11.0
7. Semi-credentialed manager	0.0	4.0	0.0	11.1	6.8	4.6
8. Semi-credentialed supervisor	0.0	3.8	1.0	3.1	2.7	3.7
9. Semi-credentialed worker	0.0	22.8	3.0	16.9	15.2	19.3
10. Uncredentialed manager	3.4	1.1	7.1	0.0	10.1	1.7
11. Uncredentialed supervisor	11.3	2.6	6.9	0.0	4.1	1.8
12. Proletarian	29.6	45.1	57.9	20.8	38.8	42.8

TABLE III.5
Class structure and the state in Sweden and the United States

	Distribution of state-linked employment within classes				Distribution of classes within the state and private sectors	
	<i>In private sector firms, estimate of percentage of business done with state</i>				Private	State
	None	<10%	10-49%	>50%		
<i>I. United States</i>						
1-2. Employers	86.4	8.5	4.2	0.9	9.5	0.0
3. Petty bourgeois	91.9	6.9	0.6	0.6	8.3	0.0
4. Expert manager	25.5	30.5	7.5	4.9	3.3	7.0
5. Expert supervisor	36.1	38.0	0.9	6.6	3.6	3.9
6. Expert non-manager	32.3	21.7	3.1	4.1	2.6	7.6
7. Semi-credentialed manager	47.2	22.7	5.2	4.9	6.0	7.0
8. Semi-credentialed supervisor	45.7	25.0	3.5	1.6	6.2	9.4
9. Semi-credentialed worker	37.4	22.2	6.1	1.8	10.0	22.7
10. Uncredentialed manager	66.1	18.8	1.7	7.8	2.7	0.7
11. Uncredentialed supervisor	56.4	24.9	4.6	1.9	7.3	4.8
12. Proletarian	56.3	20.7	4.7	2.1	40.6	36.8
Totals	55.0	20.7	4.3	2.4		17.5

^aPercentages sum horizontally

^bPercentages sum vertically

TABLE III 5 (continued)

	Distribution of state-linked employment within classes				Distribution of classes within the state and private sectors	
	<i>In private sector firms, estimate of percentage of business done with state</i>				Private	State
	None	<10%	10-49%	>50%		
<i>II. Sweden</i>						
1-2. Employers	90.6	6.3	1.5	1.5	9.4	0.0
3. Petty bourgeois	96.8	1.6	0.0	1.6	9.1	0.0
4. Expert manager	27.2	19.4	5.8	0.0	3.9	5.0
5. Expert supervisor	11.5	2.3	4.5	0.0	1.2	7.4
6. Expert non-manager	19.3	15.2	0.0	2.5	4.3	10.3
7. Semi-credentialed manager	25.5	27.4	4.2	0.0	3.9	4.2
8. Semi-credentialed supervisor	29.6	15.9	2.6	2.9	2.8	3.8
9. Semi-credentialed worker	38.0	14.2	0.5	0.5	16.2	20.1
10. Uncredentialed manager	61.1	6.8	0.0	0.0	2.9	1.9
11. Uncredentialed supervisor	46.5	11.1	0.0	0.0	3.1	3.2
12. Proletarian	45.3	11.8	0.2	0.6	43.2	44.0
Totals	44.5	12.2	0.9	0.8		41.6